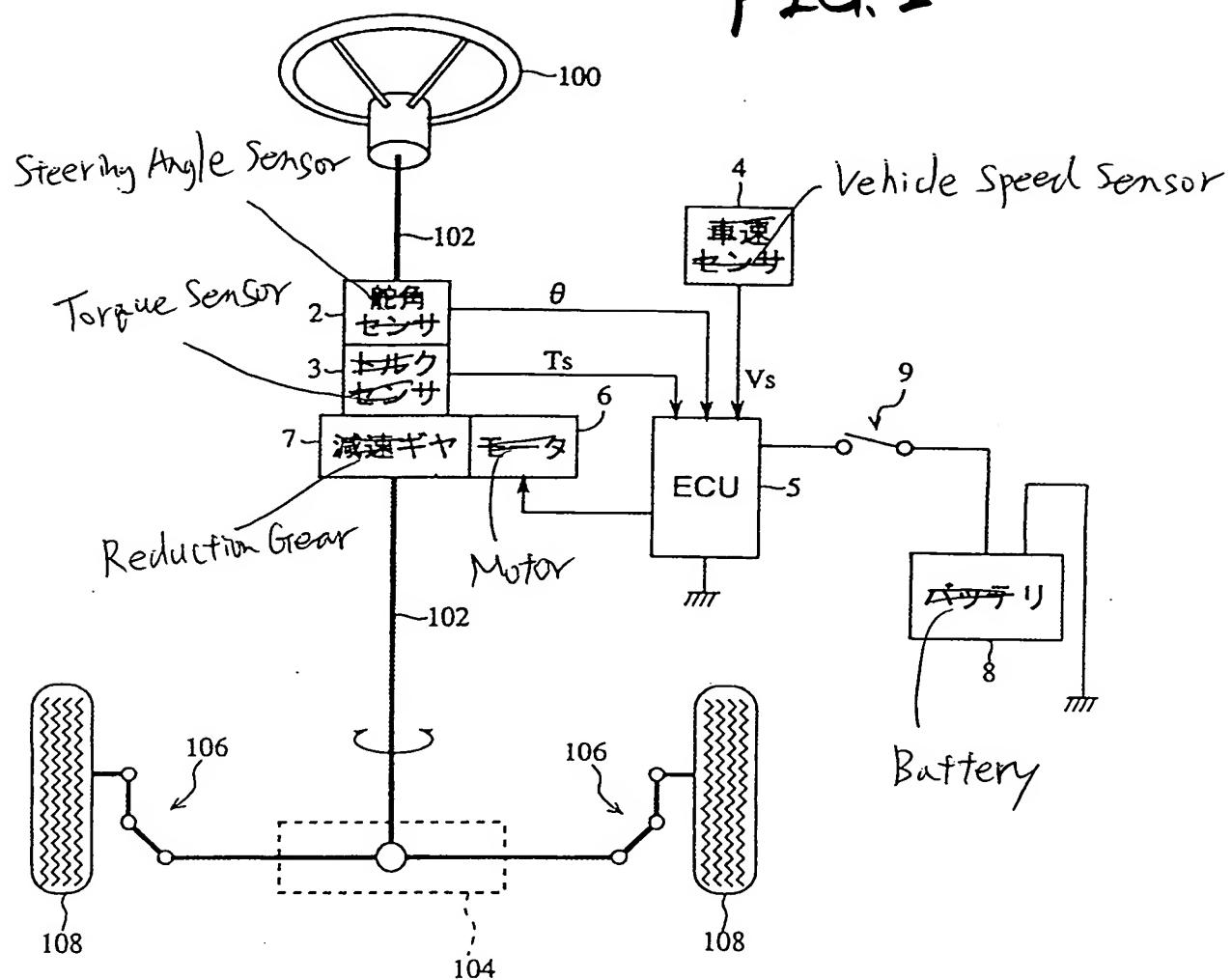


FIG. 1



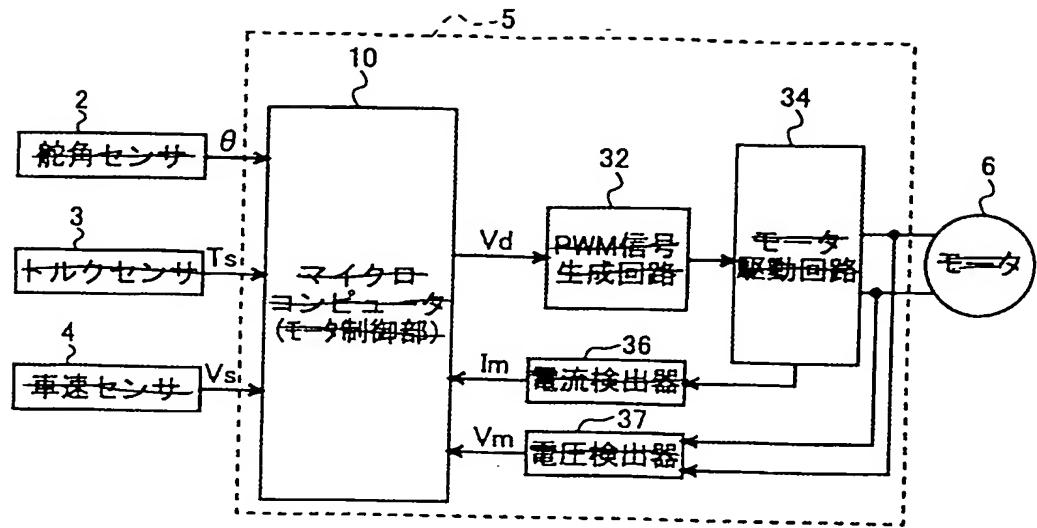


FIG.2

2 .. Steering angle sensor

3 ... Torque sensor

4 .. Vehicle speed sensor

6 .. Motor

10 .. Microcomputer (Motor control section)

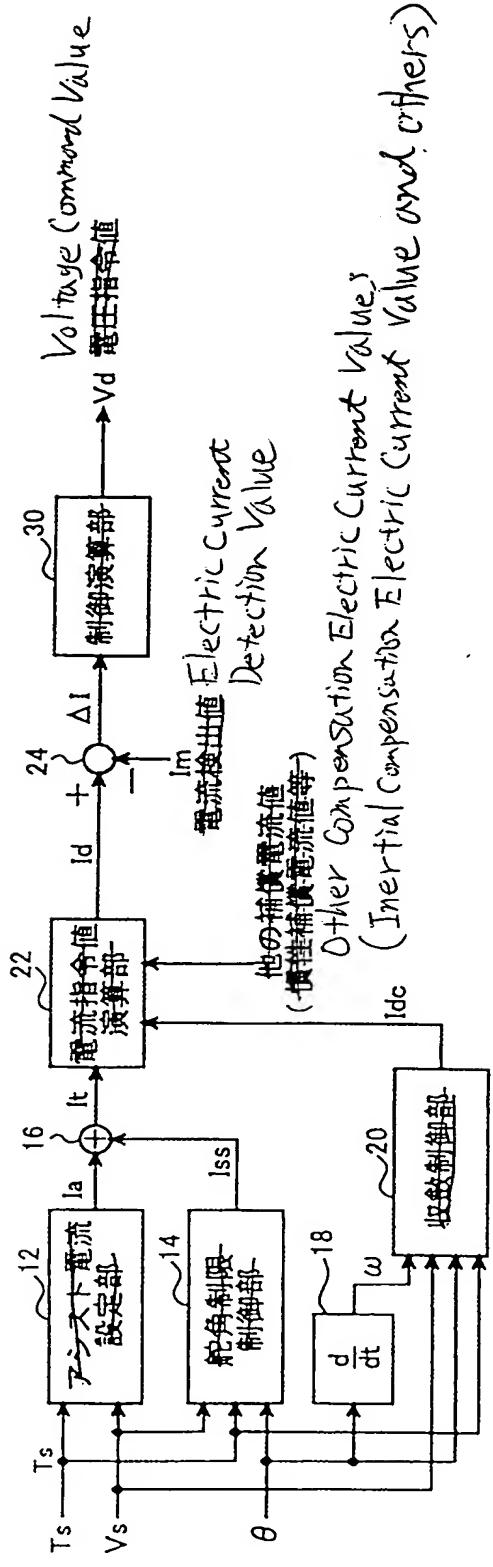
32 .. PWM signal generating circuit

34 .. Motor drive circuit

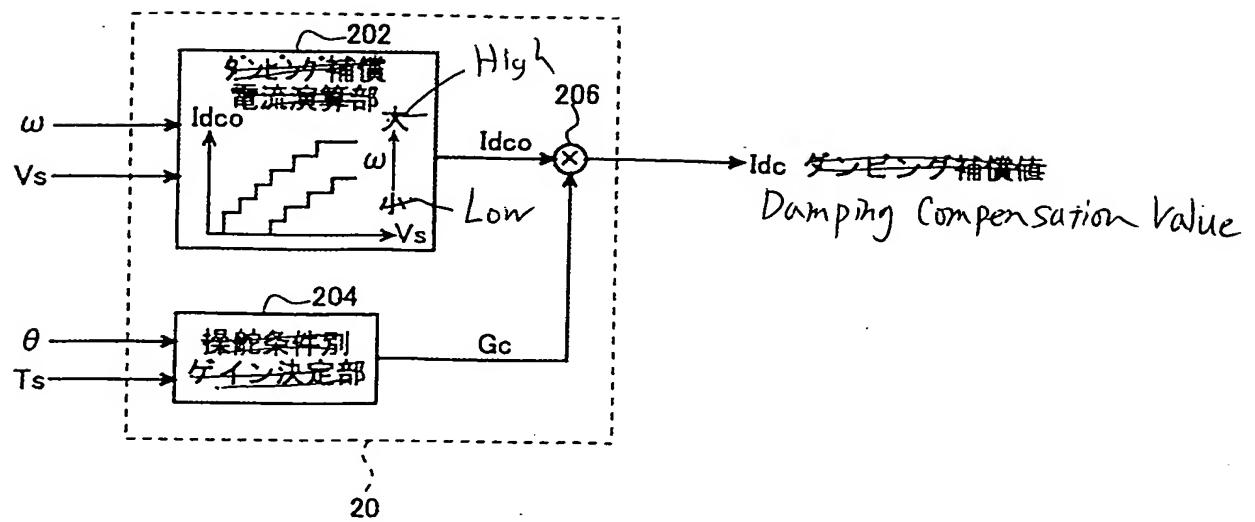
36 .. Electric current detector

37 .. Voltage detector

# FIG.3



- 12 Assisting electric current setting section
- 14 Steering angle restricting control section
- 20 Convergence control section
- 22 Electric current command value calculating section
- 30 Control calculating section



202 Damping compensation electric current calculating section

204 Gain deciding section for each steering condition

FIG.4

Fig. 5A

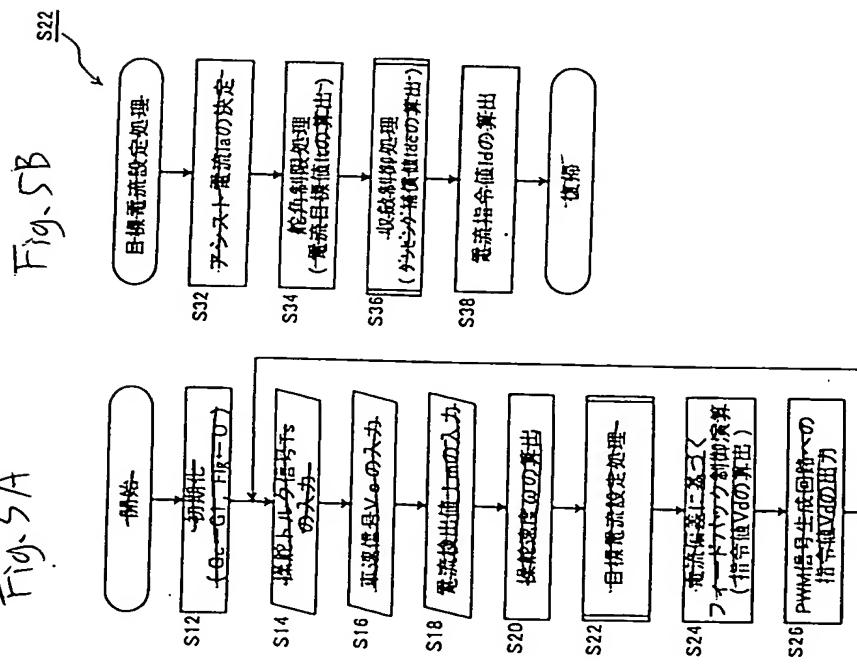


Fig. 5B

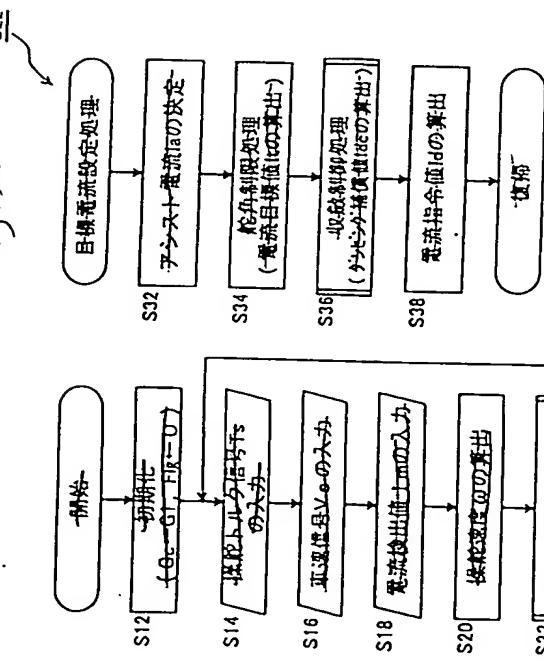


Fig. 5A

Start  
S12 Initialization

- S14 Input of steering torque signal  $T_s$
- S16 Input of vehicle speed signal  $V_s$
- S18 Input of electric current detecting value  $I_m$
- S20 Calculation of steering speed  $\omega$
- S22 Target electric current setting processing
- S24 Feedback control calculation according to electric current deviation (Calculation of command value  $V_d$ )
- S26 Output of command value  $V_d$  to  
PWM signal generating circuit

Fig. 5B

- S12 Initialization
- S14 Input of steering torque signal  $T_s$
- S16 Input of vehicle speed signal  $V_s$
- S18 Input of electric current detecting value  $I_m$
- S20 Calculation of steering speed  $\omega$
- S22 Target electric current setting processing
- S24 Decision of assisting electric current  $I_a$
- S26 Steering angle restricting processing (Calculation of electric current target value  $I_t$ )
- S32 Convergence control processing (Calculation of damping compensation value  $I_d$ )
- S38 Calculation of electric current command value  $I_d(c)$
- Return

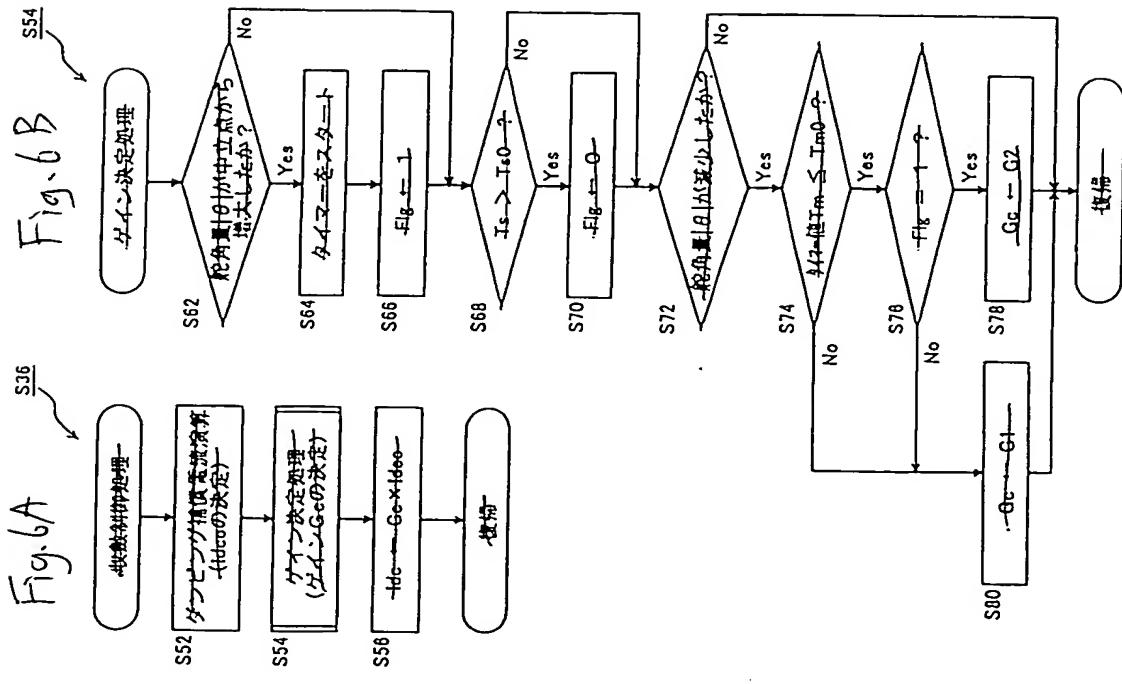


Fig. 6A

Fig. 6 B

Fig. 6 B

Fig. 6A

S52 Convergence control processing Damping compensation electric current calculation (Decision of convergence)

S54	Gain deciding processing (Decision of gain Gc)
S55	$V_{ds} \leftarrow G_c \times V_{bs}$

Return

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Fig. 6B

Gain-deciding processing

Has steering angle quantity  $|\theta|$  increased from neutral point?

Start timer

T<sub>s</sub> > T<sub>g0</sub>

S70 Fig. 0

Has steering angle quantity  $|\theta|$  decreased?

S74 Timer value  $T_m \leq T_{m0}$  ?

S76 Fig = 1?

Gc → G2

Return

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